

PARKING LOT RESERVING DEVICE

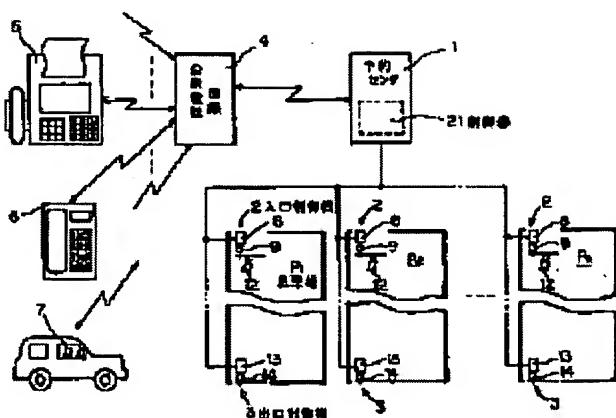
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Inventor: SASAKI SADAO; others: 05
Applicant: NIPPON SIGNAL CO LTD:THE; others: 02
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G07C9/00; G08G1/14
- **european:**
Application number: JP19930028541 19930125
Priority number(s):

Abstract of JP7021426

PURPOSE: To secure a parking space on the departure spot of a vehicle and to improve the profit of a parking lot by its efficient application by selecting a prescribed parking lot based upon parking lot reserving information inputted through a public telephone line.

CONSTITUTION: A reservation call is transmitted to a reservation center 1 through the public telephone line 4. A controller 21 in the center 1 computes whether a vehicle can be parked in respective parking lots P1 to Pn or not based upon their space information stored in a RAM, and a certain parking log has a parking space for the vehicle, sends the information of the parking lot to a user. When there is no empty space in the parking lots P1 to Pn, the result is sent to the user. When the user inputs a reservation number from an input part in an input equipment 8, the inputted reservation number is collated with a reservation number sent from the center 1 and stored in the RAM, and when both the numbers coincide with each other, a reserved parking ticket is issued. When the user inserts the reserved parking ticket into an inserting port on an exit controller, a parking charge including the reservation charge is calculated and displayed on a display part 14.



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CLAIMS

[Claim(s)]

[Claim 1] A reservation information input means to input motor pool reservation information through a dial-up line, A motor pool selection means to choose a predetermined motor pool based on the parking reservation information that said reservation information input means inputted, An output means to output selection refusal information through said dial-up line when the predetermined selection motor pool information which said motor pool selection means chose, or its motor pool selection means does not choose a predetermined motor pool, When a confirmed information input means to input the confirmed information when checking the predetermined selection motor pool information which said output means outputted through said dial-up line, and said confirmed information input means input confirmed information When a motor pool reservation information output means to output the reservation information which secured the predetermined motor pool which said motor pool selection means chose, and the reservation information outputted from said motor pool reservation information output means and the inputted information are in agreement While publishing a parking ticket, when the inlet-port control means which makes the inlet-port gate open, and said parking ticket are inserted, while computing a parking fee Motor pool reservation equipment characterized by having the outlet control means which makes the outlet gate open when the money corresponding to the computed parking fee is invested.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the thing which starts motor pool reservation equipment, and can employ a motor pool efficiently especially using a dial-up line, and enabled it to secure a parking space effectively.

[0002]

[Description of the Prior Art] the city section -- many motor pools of public management or private management -- existing -- **** -- a user -- those motor pools -- a guide plate -- a rule of thumb -- or he is trying to look for a predetermined motor pool based on the past parking experience

[0003] However, when looking for a motor pool by the parking experience of a guide plate or the past, there is a fault that a car is not parked by full parking lot if it arrives at the target motor pool, or it must wait for a long time.

[0004] Then, forming the guide plate in which the motor pool which has an empty parking space in the city section is shown, and carrying out induction advice of the car in recent years is also performed increasingly.

[0005]

[Problem(s) to be Solved by the Invention] However, also in parking by the above-mentioned conventional induction advice, there is inconvenience that it must wait until it returns, without the ability parking a car if a car is not ridden in to the city section, a guide plate cannot be seen but the guide plate shows full parking lot or free space comes out further.

[0006] Then, it is made in order that this invention may solve the above-mentioned fault, and the object is to offer the motor pool reservation equipment which can employ a motor pool efficiently and can raise a revenue while being able to secure a parking space in the deputation point of a car.

[0007]

[Means for Solving the Problem] A reservation information input means to input motor pool reservation information through a dial-up line in order that the motor pool reservation equipment concerning this invention may attain the above-mentioned object, A motor pool selection means to choose a predetermined motor pool based on the parking reservation information that the reservation information input means inputted, An output means to output selection refusal information through said dial-up line when the predetermined selection motor pool information which the motor pool selection means chose, or its motor pool selection means does not choose a predetermined motor pool, When a confirmed information input means to input the confirmed information when checking the predetermined selection motor pool information which the output means outputted through said dial-up line, and its confirmed information input means input confirmed information

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which makes the inlet-port gate open while publishing a parking ticket, and the money which balances the computed parking fee while computing a parking fee, when said parking ticket is inserted are invested.

[0008]

[Function] In the above-mentioned configuration, a motor pool selection means will choose a predetermined motor pool with free space, if a reservation information input means inputs parking reservation information. The information on this selected motor pool is sent out to those who sent out parking reservation information with the output means, i.e., those who wished to park a car. When there is no free space, the information on parking refusal is outputted to a parking candidate from an output means.

[0009] A motor pool reservation information output means will output the information which secured the parking space, i.e., reservation information, (reservation No.) to the predetermined motor pool which the motor pool selection means chose, if confirmed information is obtained from those who wished to park a car. And it makes the inlet-port gate open and makes a car advance, when the inputted information and its reservation information of an inlet-port control means correspond while it publishes a parking ticket.

[0010] When the parking fee which the parking ticket was inserted and was computed based on the parking ticket is injected, an outlet control means makes the outlet gate open, and makes a car march out.

[0011]

[Example] Hereafter, the example of this invention is explained based on a drawing. Drawing 1 is the outline block diagram of one example equipment, and reservation centers 1 are two or more motor pool P1 -Pn(s). While connecting by communication lines, such as a dial-up line, between the inlet-port control machine 2 and the outlet control machine 3, it connects with the facsimile transceiver machine (henceforth FAX) 5, telephone 6, and the automobile telephone (a cellular-phone machine is included) 7 through the dial-up line 4.

[0012] The inlet-port control machine 2 consists of an input machine 8 and the inlet-port gate 9. Among these, as the input machine 8 is shown in drawing 2, the issue-of-banknotes opening 11 of the parking ticket C set to the reception panel 8a from the touch-sensitive input section 10 and a touch-sensitive magnetic card is formed. Therefore, although not illustrated, the parking ticket issuance unit is built in this input machine 8. moreover, some display screens of the input section 10 -- 10a -- motor pool P1 -Pn It is constituted so that the screen which the television camera 12 prepared in the inlet port picturized can be displayed.

[0013] If the inlet-port gate 9 is established in the well-known motor pool, it is the same gate which the pole opens and closes by the motor, and it is constituted so that it may be controlled by the above-mentioned input machine 8.

[0014] The outlet control machine 3 consists of a parking fee settlement-of-accounts machine (henceforth a settlement-of-accounts machine) 13, and the outlet gate 14. Among these, if the settlement-of-accounts machine 13 has the display 14 which displays the amount of a parking fee on the reception panel 13a, the insertion opening 15 of the parking ticket C, coin input port 16, the insertion opening 17 that inserts cards, such as a bill and a credit card, ** 18 pushed when wishing to have a receipt, the receipt issuance opening 19, and the change exhaust port 20 and is formed in the well-known motor pool as shown in drawing 3, it is presenting the same configuration.

[0015] The outlet gate 14 is carrying out the same configuration as the inlet-port gate 9, and it is constituted so that it may be controlled by the settlement-of-accounts machine 13.

[0016] Drawing 4 is the block diagram showing the electric configuration of this example equipment, and the controller 21 which consists of a microcomputer equipped with communication facility is formed in the reservation center 1.

[0017] This controller 21 has the central-process section (CPU) 24 which carries out data processing using the system program stored in ROM22, and the working data stored in RAM23.

[0018] the 1st communications control section 25 for CPU24 to communicate with a dial-up line 4 --

each -- motor pool P1 -Pn While connecting the 2nd communications control section 26 for communicating with the inlet-port controller 2 and the outlet controller 3 and being The display driver 28 which carries out actuation control of the display screen 27, the printing driver 30 which carries out actuation control of the printer 29, and the input driver 32 which inputs the data from a keyboard 31 are connected through an input/output unit 27.

[0019] each -- motor pool P1 -Pn since the inlet-port controller 2 and the outlet controller 3 which are installed are the same configuration -- drawing 4 -- motor pool P1 ***** it has illustrated.

[0020] The inlet-port control machine 8 has the central-process section (CPU) 35 which carries out data processing using the system program stored in ROM33, and the working data stored in RAM34.

[0021] This CPU35 has connected the parking ticket issuance unit 38 which publishes the parking ticket C through an input/output unit 37, the gate driver 39 which carries out actuation control of the inlet-port gate 9, and the input unit 40 which inputs the data from the touch-sensitive input section 10 while having connected the communications control section 36 for communicating a reservation center 1 side.

[0022] In addition, although it has omitted in order to simplify a drawing, the sensor which detects the location of the image pick-up unit of a television camera 12 or a car is connected to the input/output unit 37.

[0023] The outlet control machine 13 has the central-process section (CPU) 43 which carries out data processing using the system program stored in ROM41, and the working data stored in RAM42.

[0024] This CPU43 has connected the settlement-of-accounts unit 46 for displaying a parking fee through an input/output unit 45, and accepting a parking fee, the gate driver 47 which carries out actuation control of the outlet gate 14, and the receipt issuance unit 48 which publishes a receipt when ** 18 for receipt issuance is pushed while having connected the communications control section 44 for communicating a reservation center 1 side.

[0025] In addition, although the sensor which detects a car is connected to the input/output unit 45, since it is not directly related to explanation of this invention, it is omitted.

[0026] Next, the control action by the side of a reservation center 1 is explained using the flow chart of drawing 5. first -- each -- motor pool P1 -Pn if those who can use are explained -- each -- motor pool P1 -Pn What can be used is divided into the non-member who has not done the agreement other than the special member who is considering the agreement as the motor pool manager, and a general member.

[0027] The member includes the individual or the corporation, and while facilities are given to the ability of a parking fee to be collected from a predetermined financial institution, the access which a special member can park in any times is granted. Moreover, in the case of the corporation member, in order to distinguish a business vehicle and personnel's individual man riding car, plate No. of the discernment data of a business vehicle, for example, a car, is beforehand memorized by RAM23 of a reservation center 1.

[0028] Now, the reservation telephone (communication link) should be in the reservation center 1 from telephone 6 through the dial-up line 4 now (step 100 affirmation.). Hereafter, a step is set to S..

[0029] In addition, in order to prevent the risk by the side of a motor pool when the call to a reservation center 1 carries out only reservation and a non-member does not park it actually, based on the agreement of the firm of a dial-up line 4, and a motor pool manager, the tariff structure which can add the charge of information (parking fee) to a usage rate, and the so-called "call-based system []" method are adopted.

[0030] The communication link to a reservation center 1 is performed by dialing the information (it being "050515" at the time from 3:00 p.m. on May 5) on from when of what day a car is parked while dialing the number of "#0" after "#" after the call origination of a reservation center 1 according to a predetermined procedure in the case of a member number and a non-member.

[0031] when a telephone partner (user) is a general member or the non-member (S102 negation), the control machine 21 of a reservation center 1 memorizes at RAM23 -- each -- motor pool P1 -Pn supposing it calculates whether a car can be parked based on empty information and parking is possible (S104 negation) -- the motor pool P1, for example, a motor pool, The information on the purport which can be parked is sent out to a user (S106, S108). moreover -- each -- motor pool P1 -Pn When there is no free space, (S104 affirmation) and that are sent out to a user (S110). Signal transduction to a user is

performed through a well-known composite tone generator, although not shown in drawing 4 . [0032] The motor pool P1 which the control machine 21 chose when a user was a special member (S102 affirmation), for example, a motor pool, Information is sent out to a user. that is, -- since the special member has the access which can be parked at any time -- each -- motor pool P1 -Pn **** -- it is a fixed rate and the parking space for special members is always secured. for this reason, a special member -- usually -- between motor pool managers -- specially -- dues -- payment -- it is made like or the agreement of paying the parking fee of a large sum is made by the general member or the non-member. [0033] When satisfied with the selected motor pool, the user who acquired the information which can be parked the time of wanting to dial the information on to that effect (for example, "#1") (S112 affirmation), and to choose another motor pool -- the information on to that effect (for example, "#2") -- dialing (negation S112 --) S -- the information on to that effect (for example, "#3") is dialed 114 **** to stop reservation further (SS114 negation). [0034] If the motor pool of hope is chosen as mentioned above, a reservation number, "1234", will be sent out to a user from a reservation center 1 side (S116). [for example,] [0035] Moreover, if the information on being the need is also sent out, and the map to a motor pool dials the information on to that effect (for example, "#1"), and FAXNo. in this case when that map is required, a user can obtain that map (S118 affirmation, S120). [0036] Arrival of the time of day reserved by the above S100 starts a parking fee from this event (S122 affirmation, S124). Moreover, the reservation is canceled when there is a communication link of cancellation by reservation time-of-day arrival (S122 negation, S126 affirmation). This cancellation is performed by dialing predetermined information (for example, "#9"), after carrying out call origination of the reservation center 1 beforehand, and dialing, predetermined procedure, for example, reservation number. [0037] If a user's car will enter a motor pool by reservation time of day, a series of reservation processings by the side of a reservation center 1 will be ended (S126 affirmation). In addition, the flow chart of following drawing 6 explains whether the reservation vehicle came in. [0038] By the way, the case where a car is not parked even if it reserves can be considered. Since a motor pool manager will suffer unexpected damage when reservation is canceled without notice, since especially the non-member has not contracted the agreement with a motor pool manager While canceling reservation automatically after progress between predetermined time, for example, 10 minutes, from reservation time of day, dial-up line firms including a cancellation fee collect to the phonecall charges of the reserved telephone, and the cancellation fee has been obtained through the dial-up line firm (S128, S130). [0039] In addition, a member does not arrive to a motor pool even at reservation time of day (to predetermined time progress), but when canceled automatically, there is no possibility that a motor pool manager may suffer [of (S128) and its member] damage since the cancellation tariff is possible for draw down and *****. [0040] Drawing 6 is a flow chart which shows the control action of the inlet-port control machine 2. If a user inputs reservation No. from the input section 10 of the input machine 8, CPU35 will perform collating with inputted reservation No. and reservation No. which is sent out from a reservation center 1 side and memorized in RAM34. [0041] If in agreement in this collating (S200 affirmation, S202 affirmation), while the reservation parking ticket C will be published, the inlet-port gate 9 serves as open, penetration of a car is attained, and a car can be parked (S204). [0042] Of course, when reservation No. is an inequality, since it is not a reservation vehicle, entrance is refused (S206). [0043] By the way, only a company-owned vehicle enables it to park a car as a member, and it will be necessary to enable it to park a member's individual man riding car at the personnel individual's burden as a non-member like [in the case of a corporation member]. [0044] In such a case, it becomes possible to sort out by registering beforehand plate No. of a car which can use a motor pool at a firm burden into RAM23 by the side of a reservation center 1.

[0045] When a member is a corporation member, plate No. of the car with which the corporation firm other than reservation No. is registered is also sent out and memorized by RAM34 from a reservation center 1 side. Therefore, a user will also input plate No. of a car from the input section 10 besides reservation No.

[0046] In this case, generally, since it is rare, it can input easily that the user remembers plate No. of a company-owned vehicle, looking at the plate of the display screen which the television camera 12 photoed which appeared in 10' in part.

[0047] In addition, although the time of parking a company-owned vehicle was explained, an above-mentioned example can be used not only a company-owned vehicle but when parking only the registered specific car.

[0048] Drawing 7 is a flow chart which shows the control action of the outlet control machine 3, and shows actuation in case a car participates from a motor pool.

[0049] First, if the reservation parking ticket C is inserted in the insertion opening 15 when a user is going to participate (S300 affirmation), data processing of the magnetic data memorized by the reservation parking ticket C will be read and carried out, and the parking fee containing a reservation tariff will be computed (S302). and -- it is computed and a parking fee is displayed on a display 14 (S304). In addition, it can be decided to be arbitration by the agreement between a user and a motor pool manager whether a reservation tariff is included.

[0050] In addition, the data is written in by the reader which is not illustrated for the reservation parking ticket C, when the motor pool is prepared underground at the department store and it exempts from it or discounts a parking fee in the case of the purchase amount of money more than predetermined etc.

[0051] If the displayed parking fee is inserted from coin input port 16 or a slot for bills 17, the outlet gate 14 will be opened and participation of a car will be permitted (S306 affirmation, S308). Moreover, when a receipt is required, a receipt is published like a settlement-of-accounts machine with the conventional receipt issuance function by carrying out the depression of ** 16.

[0052] It is the case where a user is the member, and when a parking fee is collected from a predetermined financial institution, after inserting the reservation parking ticket C in the insertion opening 15 and displaying a parking fee, the data of a parking fee are stored in RAM23 by the side of a reservation center 1 by inserting a credit card in the insertion opening 17. Subsequently, the controller 21 of a reservation center 1 is connected with the computer of a credit card company (not shown) through the 1st communications control section 25. Therefore, in this invention, collection of such a parking fee is also included, "when the money corresponding to a parking fee is able to be invested."

[0053] The display screen 27 and the printer 29 grade of a controller 21 of a reservation center 1 are each motor pools P1-Pn. It is used when grasping a utilization situation etc. Moreover, it is used also at the times, such as registration of a member and deletion. That is, like the well-known personal computer, this controller 21 is constituted so that various kinds of services can be performed.

[0054] As mentioned above, since the motor pool reservation equipment concerning this example can reserve a motor pool, taking a check through a dial-up line, since a user can reserve on a depature point or the previous day, he can go to the object in comfort.

[0055] In addition, since the special member system is provided, the special member's user can park a car at any time.

[0056] Moreover, in a motor pool side, since a predetermined cancellation fee can be collected even if it leads to improvement in a revenue and unapproved cancellation is carried out further, since a motor pool can be efficiently employed by reservation, loss by unapproved cancellation can be prevented.

[0057] In addition, although the reservation center 1 side showed the example of complete automation in the above-mentioned example, it is good also as owner man reception by the operator. Moreover, two or more motor pool P1 -Pn(s) in a reservation center 1 Although it was made to manage, in the case of a large-sized motor pool, the controller 21 by the side of the reservation center 1 which the CPU35 grade of the inlet-port control machine 2 mentioned above in this case whose number may be one will be made to serve a double purpose.

[0058]

[Effect of the Invention] Since the motor pool reservation equipment concerning this invention can reserve a motor pool while a user takes a check through a dial-up line, in a depature point, it can be reserved on the previous day etc. and can go to the destination in comfort. Moreover, in a motor pool side, since a motor pool can be efficiently employed based on reservation, it becomes possible to raise a revenue.

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TECHNICAL FIELD

[Industrial Application] This invention relates to the thing which starts motor pool reservation equipment, and can employ a motor pool efficiently especially using a dial-up line, and enabled it to secure a parking space effectively.

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PRIOR ART

[Description of the Prior Art] the city section -- many motor pools of public management or private management -- existing -- **** -- a user -- those motor pools -- a guide plate -- a rule of thumb -- or he is trying to look for a predetermined motor pool based on the past parking experience

[0003] However, when looking for a motor pool by the parking experience of a guide plate or the past, there is a fault that a car is not parked by full parking lot if it arrives at the target motor pool, or it must wait for a long time.

[0004] Then, forming the guide plate in which the motor pool which has an empty parking space in the city section is shown, and carrying out induction advice of the car in recent years is also performed increasingly.

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, also in parking by the above-mentioned conventional induction advice, there is inconvenience that it must wait until it returns, without the ability parking a car if a car is not ridden in to the city section, a guide plate cannot be seen but the guide plate shows full parking lot or free space comes out further.

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MEANS

[Means for Solving the Problem] This invention is characterized by providing the following to motor pool reservation equipment, in order to attain the above-mentioned object. A reservation information input means to input motor pool reservation information through a dial-up line A motor pool selection means to choose a predetermined motor pool based on the parking reservation information that the reservation information input means inputted An output means to output selection refusal information through said dial-up line when the predetermined selection motor pool information which the motor pool selection means chose, or its motor pool selection means does not choose a predetermined motor pool When a confirmed information input means to input the confirmed information when checking the predetermined selection motor pool information which the output means outputted through said dial-up line, and its confirmed information input means input confirmed information When a motor pool reservation information output means to output the reservation information which secured the predetermined motor pool which said motor pool selection means chose, and the reservation information outputted from the motor pool reservation information output means and the inputted information are in agreement The outlet control means which makes the outlet gate open when the money corresponding to the computed parking fee is invested, while computing a parking fee, when said parking ticket is inserted, the inlet-port control means which makes the inlet-port gate open while publishing a parking ticket

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OPERATION

[Function] In the above-mentioned configuration, a motor pool selection means will choose a predetermined motor pool with free space, if a reservation information input means inputs parking reservation information. The information on this selected motor pool is sent out to those who sent out parking reservation information with the output means, i.e., those who wished to park a car. When there is no free space, the information on parking refusal is outputted to a parking candidate from an output means.

[0009] A motor pool reservation information output means will output the information which secured the parking space, i.e., reservation information, (reservation No.) to the predetermined motor pool which the motor pool selection means chose, if confirmed information is obtained from those who wished to park a car. And it makes the inlet-port gate open and makes a car advance, when the inputted information and its reservation information of an inlet-port control means correspond while it publishes a parking ticket.

[0010] When the parking fee which the parking ticket was inserted and was computed based on the parking ticket is injected, an outlet control means makes the outlet gate open, and makes a car march out.

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EXAMPLE

[Example] Hereafter, the example of this invention is explained based on a drawing. Drawing 1 is the outline block diagram of one example equipment, and reservation centers 1 are two or more motor pool P1 -Pn(s). While connecting by communication lines, such as a dial-up line, between the inlet-port control machine 2 and the outlet control machine 3, it connects with the facsimile transceiver machine (henceforth FAX) 5, telephone 6, and the automobile telephone (a cellular-phone machine is included) 7 through the dial-up line 4.

[0012] The inlet-port control machine 2 consists of an input machine 8 and the inlet-port gate 9. Among these, as the input machine 8 is shown in drawing 2, the issue-of-banknotes opening 11 of the parking ticket C set to the reception panel 8a from the touch-sensitive input section 10 and a touch-sensitive magnetic card is formed. Therefore, although not illustrated, the parking ticket issuance unit is built in this input machine 8. moreover, some display screens of the input section 10 -- 10a -- motor pool P1 -Pn It is constituted so that the screen which the television camera 12 prepared in the inlet port picturized can be displayed.

[0013] If the inlet-port gate 9 is established in the well-known motor pool, it is the same gate which the pole opens and closes by the motor, and it is constituted so that it may be controlled by the above-mentioned input machine 8.

[0014] The outlet control machine 3 consists of a parking fee settlement-of-accounts machine (henceforth a settlement-of-accounts machine) 13, and the outlet gate 14. Among these, if the settlement-of-accounts machine 13 has the display 14 which displays the amount of a parking fee on the reception panel 13a, the insertion opening 15 of the parking ticket C, coin input port 16, the insertion opening 17 that inserts cards, such as a bill and a credit card, ** 18 pushed when wishing to have a receipt, the receipt issuance opening 19, and the change exhaust port 20 and is formed in the well-known motor pool as shown in drawing 3, it is presenting the same configuration.

[0015] The outlet gate 14 is carrying out the same configuration as the inlet-port gate 9, and it is constituted so that it may be controlled by the settlement-of-accounts machine 13.

[0016] Drawing 4 is the block diagram showing the electric configuration of this example equipment, and the controller 21 which consists of a microcomputer equipped with communication facility is formed in the reservation center 1.

[0017] This controller 21 has the central-process section (CPU) 24 which carries out data processing using the system program stored in ROM22, and the working data stored in RAM23.

[0018] the 1st communications control section 25 for CPU24 to communicate with a dial-up line 4 -- each -- motor pool P1 -Pn While connecting the 2nd communications control section 26 for communicating with the inlet-port controller 2 and the outlet controller 3 and being The display driver 28 which carries out actuation control of the display screen 27, the printing driver 30 which carries out actuation control of the printer 29, and the input driver 32 which inputs the data from a keyboard 31 are connected through an input/output unit 27.

[0019] each -- motor pool P1 -Pn since the inlet-port controller 2 and the outlet controller 3 which are installed are the same configuration -- drawing 4 -- motor pool P1 ***** -- it has illustrated.

[0020] The inlet-port control machine 8 has the central-process section (CPU) 35 which carries out data processing using the system program stored in ROM33, and the working data stored in RAM34.

[0021] This CPU35 has connected the parking ticket issuance unit 38 which publishes the parking ticket C through an input/output unit 37, the gate driver 39 which carries out actuation control of the inlet-port gate 9, and the input unit 40 which inputs the data from the touch-sensitive input section 10 while having connected the communications control section 36 for communicating a reservation center 1 side.

[0022] In addition, although it has omitted in order to simplify a drawing, the sensor which detects the location of the image pick-up unit of a television camera 12 or a car is connected to the input/output unit 37.

[0023] The outlet control machine 13 has the central-process section (CPU) 43 which carries out data processing using the system program stored in ROM41, and the working data stored in RAM42.

[0024] This CPU43 has connected the settlement-of-accounts unit 46 for displaying a parking fee through an input/output unit 45, and accepting a parking fee, the gate driver 47 which carries out actuation control of the outlet gate 14, and the receipt issuance unit 48 which publishes a receipt when ** 18 for receipt issuance is pushed while having connected the communications control section 44 for communicating a reservation center 1 side.

[0025] In addition, although the sensor which detects a car is connected to the input/output unit 45, since it is not directly related to explanation of this invention, it is omitted.

[0026] Next, the control action by the side of a reservation center 1 is explained using the flow chart of drawing 5. first -- each -- motor pool P1 -Pn if those who can use are explained -- each -- motor pool P1 -Pn What can be used is divided into the non-member who has not done the agreement other than the special member who is considering the agreement as the motor pool manager, and a general member.

[0027] The member includes the individual or the corporation, and while facilities are given to the ability of a parking fee to be collected from a predetermined financial institution, the access which a special member can park in any times is granted. Moreover, in the case of the corporation member, in order to distinguish a business vehicle and personnel's individual man riding car, plate No. of the discernment data of a business vehicle, for example, a car, is beforehand memorized by RAM23 of a reservation center 1.

[0028] Now, the reservation telephone (communication link) should be in the reservation center 1 from telephone 6 through the dial-up line 4 now (step 100 affirmation.). Hereafter, a step is set to S..

[0029] In addition, in order to prevent the risk by the side of a motor pool when the call to a reservation center 1 carries out only reservation and a non-member does not park it actually, based on the agreement of the firm of a dial-up line 4, and a motor pool manager, the tariff structure which can add the charge of information (parking fee) to a usage rate, and the so-called "call-based system []" method are adopted.

[0030] The communication link to a reservation center 1 is performed by dialing the information (it being "050515" at the time from 3:00 p.m. on May 5) on from when of what day a car is parked while dialing the number of "#0" after "#" after the call origination of a reservation center 1 according to a predetermined procedure in the case of a member number and a non-member.

[0031] when a telephone partner (user) is a general member or the non-member (S102 negation), the control machine 21 of a reservation center 1 memorizes at RAM23 -- each -- motor pool P1 -Pn supposing it calculates whether a car can be parked based on empty information and parking is possible (S104 negation) -- the motor pool P1, for example, a motor pool, The information on the purport which can be parked is sent out to a user (S106, S108). moreover -- each -- motor pool P1 -Pn When there is no free space, (S104 affirmation) and that are sent out to a user (S110). Signal transduction to a user is performed through a well-known composite tone generator, although not shown in drawing 4.

[0032] The motor pool P1 which the control machine 21 chose when a user was a special member (S102 affirmation), for example, a motor pool, Information is sent out to a user. that is, -- since the special member has the access which can be parked at any time -- each -- motor pool P1 -Pn **** -- it is a fixed rate and the parking space for special members is always secured. for this reason, a special member -- usually -- between motor pool managers -- specially -- dues -- payment -- it is made like or the agreement of paying the parking fee of a large sum is made by the general member or the non-member.

[0033] When satisfied with the selected motor pool, the user who acquired the information which can be parked the time of wanting to dial the information on to that effect (for example, "#1") (S112 affirmation), and to choose another motor pool -- the information on to that effect (for example, "#2") -- dialing (negation S112 --) S -- the information on to that effect (for example, "#3") is dialed 114 **** to stop reservation further (SS114 negation).

[0034] If the motor pool of hope is chosen as mentioned above, a reservation number, "1234", will be sent out to a user from a reservation center 1 side (S116). [for example,]

[0035] Moreover, if the information on being the need is also sent out, and the map to a motor pool dials the information on to that effect (for example, "#1"), and FAXNo. in this case when that map is required, a user can obtain that map (S118 affirmation, S120).

[0036] Arrival of the time of day reserved by the above S100 starts a parking fee from this event (S122 affirmation, S124). Moreover, the reservation is canceled when there is a communication link of cancellation by reservation time-of-day arrival (S122 negation, S126 affirmation). This cancellation is performed by dialing predetermined information (for example, "#9"), after carrying out call origination of the reservation center 1 beforehand, and dialing, predetermined procedure, for example, reservation number.

[0037] If a user's car will enter a motor pool by reservation time of day, a series of reservation processings by the side of a reservation center 1 will be ended (S126 affirmation). In addition, the flow chart of following drawing 6 explains whether the reservation vehicle came in.

[0038] By the way, the case where a car is not parked even if it reserves can be considered. Since a motor pool manager will suffer unexpected damage when reservation is canceled without notice, since especially the non-member has not contracted the agreement with a motor pool manager While canceling reservation automatically after progress between predetermined time, for example, 10 minutes, from reservation time of day, dial-up line firms including a cancellation fee collect to the phonecall charges of the reserved telephone, and the cancellation fee has been obtained through the dial-up line firm (S128, S130).

[0039] In addition, a member does not arrive to a motor pool even at reservation time of day (to predetermined time progress), but when canceled automatically, there is no possibility that a motor pool manager may suffer [of (S128) and its member] damage since the cancellation tariff is possible for draw down and *****.

[0040] Drawing 6 is a flow chart which shows the control action of the inlet-port control machine 2. If a user inputs reservation No. from the input section 10 of the input machine 8, CPU35 will perform collating with inputted reservation No. and reservation No. which is sent out from a reservation center 1 side and memorized in RAM34.

[0041] If in agreement in this collating (S200 affirmation, S202 affirmation), while the reservation parking ticket C will be published, the inlet-port gate 9 serves as open, penetration of a car is attained, and a car can be parked (S204).

[0042] Of course, when reservation No. is an inequality, since it is not a reservation vehicle, entrance is refused (S206).

[0043] By the way, only a company-owned vehicle enables it to park a car as a member, and it will be necessary to enable it to park a member's individual man riding car at the personnel individual's burden as a non-member like [in the case of a corporation member].

[0044] In such a case, it becomes possible to sort out by registering beforehand plate No. of a car which can use a motor pool at a firm burden into RAM23 by the side of a reservation center 1.

[0045] When a member is a corporation member, plate No. of the car with which the corporation firm other than reservation No. is registered is also sent out and memorized by RAM34 from a reservation center 1 side. Therefore, a user will also input plate No. of a car from the input section 10 besides reservation No.

[0046] In this case, generally, since it is rare, it can input easily that the user remembers plate No. of a company-owned vehicle, looking at the plate of the display screen which the television camera 12 photoed which appeared in 10' in part.

[0047] In addition, although the time of parking a company-owned vehicle was explained, an above-mentioned example can be used not only a company-owned vehicle but when parking only the registered specific car.

[0048] Drawing 7 is a flow chart which shows the control action of the outlet control machine 3, and shows actuation in case a car participates from a motor pool.

[0049] First, if the reservation parking ticket C is inserted in the insertion opening 15 when a user is going to participate (S300 affirmation), data processing of the magnetic data memorized by the reservation parking ticket C will be read and carried out, and the parking fee containing a reservation tariff will be computed (S302). and -- it is computed and a parking fee is displayed on a display 14 (S304). In addition, it can be decided to be arbitration by the agreement between a user and a motor pool manager whether a reservation tariff is included.

[0050] In addition, the data is written in by the reader which is not illustrated for the reservation parking ticket C, when the motor pool is prepared underground at the department store and it exempts from it or discounts a parking fee in the case of the purchase amount of money more than predetermined etc.

[0051] If the displayed parking fee is inserted from coin input port 16 or a slot for bills 17, the outlet gate 14 will be opened and participation of a car will be permitted (S306 affirmation, S308). Moreover, when a receipt is required, a receipt is published like a settlement-of-accounts machine with the conventional receipt issuance function by carrying out the depression of ** 16.

[0052] It is the case where a user is the member, and when a parking fee is collected from a predetermined financial institution, after inserting the reservation parking ticket C in the insertion opening 15 and displaying a parking fee, the data of a parking fee are stored in RAM23 by the side of a reservation center 1 by inserting a credit card in the insertion opening 17. Subsequently, the controller 21 of a reservation center 1 is connected with the computer of a credit card company (not shown) through the 1st communications control section 25. Therefore, in this invention, collection of such a parking fee is also included, "when the money corresponding to a parking fee is able to be invested."

[0053] The display screen 27 and the printer 29 grade of a controller 21 of a reservation center 1 are each motor pools P1-Pn. It is used when grasping a utilization situation etc. Moreover, it is used also at the times, such as registration of a member and deletion. That is, like the well-known personal computer, this controller 21 is constituted so that various kinds of services can be performed.

[0054] As mentioned above, since the motor pool reservation equipment concerning this example can reserve a motor pool, taking a check through a dial-up line, since a user can reserve on a departure point or the previous day, he can go to the object in comfort.

[0055] In addition, since the special member system is provided, the special member's user can park a car at any time.

[0056] Moreover, in a motor pool side, since a predetermined cancellation fee can be collected even if it leads to improvement in a revenue and unapproved cancellation is carried out further, since a motor pool can be efficiently employed by reservation, loss by unapproved cancellation can be prevented.

[0057] In addition, although the reservation center 1 side showed the example of complete automation in the above-mentioned example, it is good also as owner man reception by the operator. Moreover, two or more motor pool P1 -Pn(s) in a reservation center 1 Although it was made to manage, in the case of a large-sized motor pool, the controller 21 by the side of the reservation center 1 which the CPU35 grade of the inlet-port control machine 2 mentioned above in this case whose number may be one will be made to serve a double purpose.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the outline block diagram of the one example equipment of this invention.

[Drawing 2] It is the front view of an input machine.

[Drawing 3] It is the front view of a settlement-of-accounts machine.

[Drawing 4] It is the block diagram showing the electric configuration of one example equipment.

[Drawing 5] It is the flow chart which shows the control action by the side of a reservation center.

[Drawing 6] It is the flow chart which shows the control action by the side of an inlet-port control machine.

[Drawing 7] It is the flow chart which shows the control action by the side of an outlet control machine.

[Description of Notations]

1 Reservation Center

2 Inlet-Port Control Machine

3 Outlet Control Machine

4 Dial-up Line

5 FAX

6 Telephone

7 Automobile Telephone

21 Control Machine

[Translation done.]

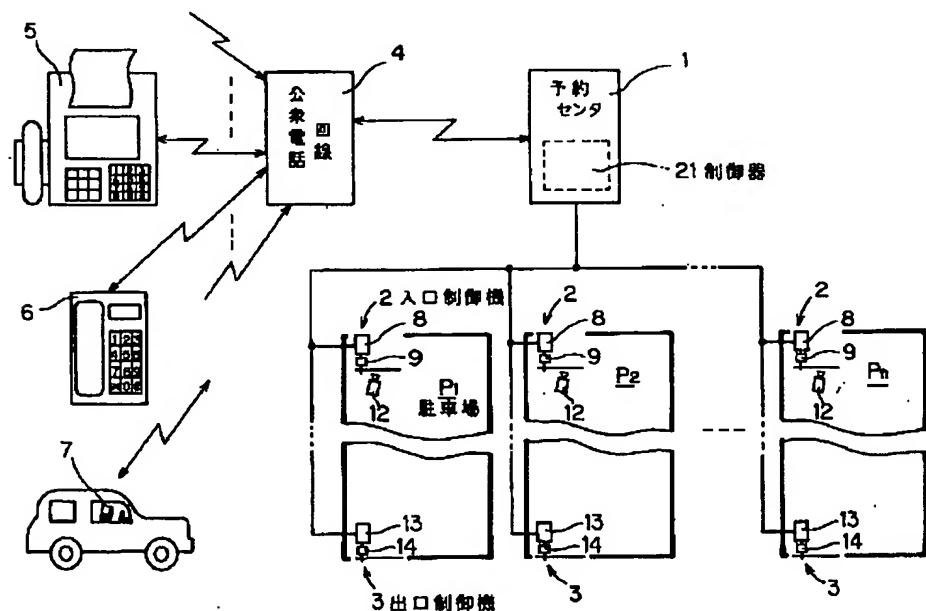
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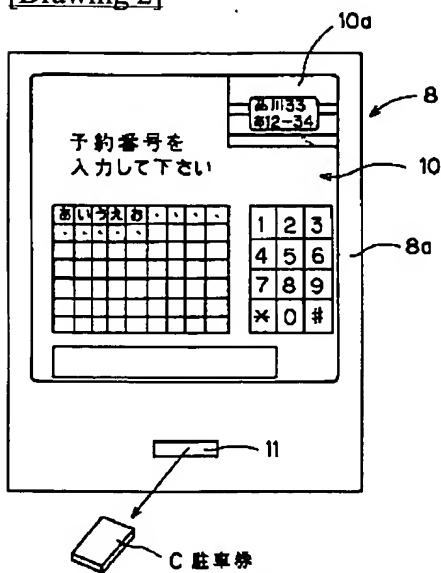
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DRAWINGS

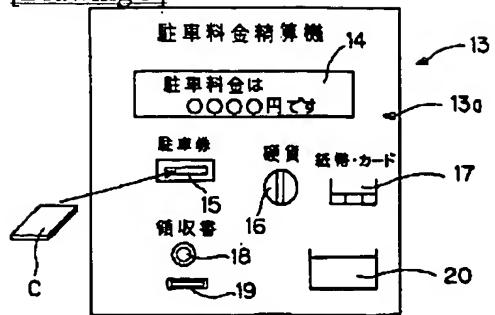
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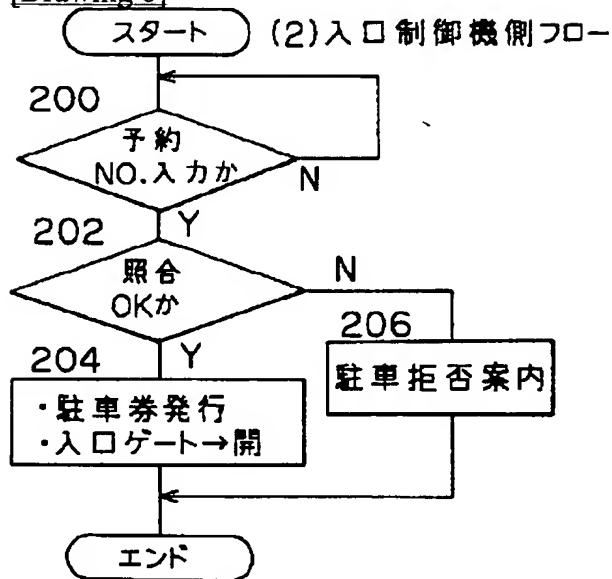
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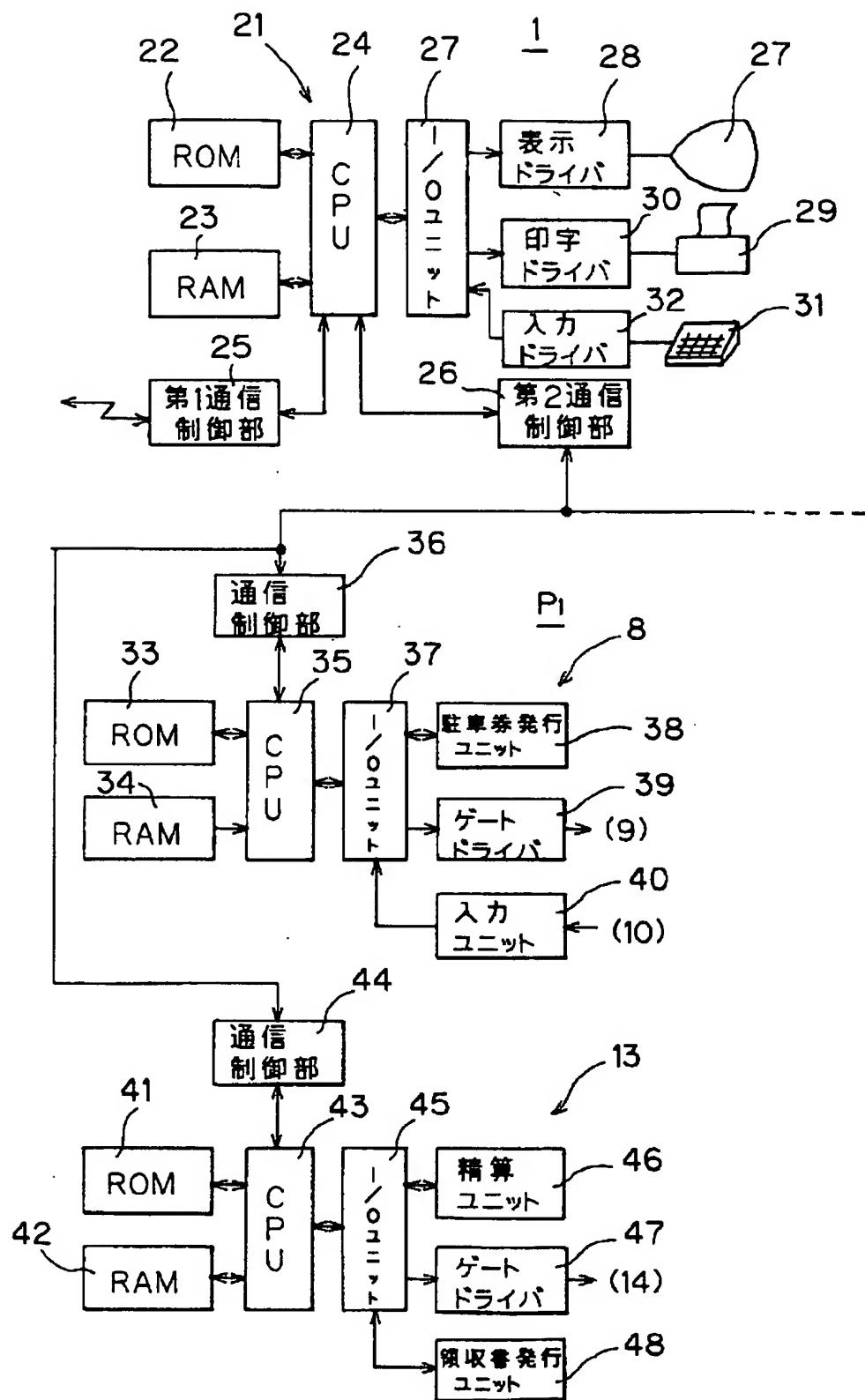
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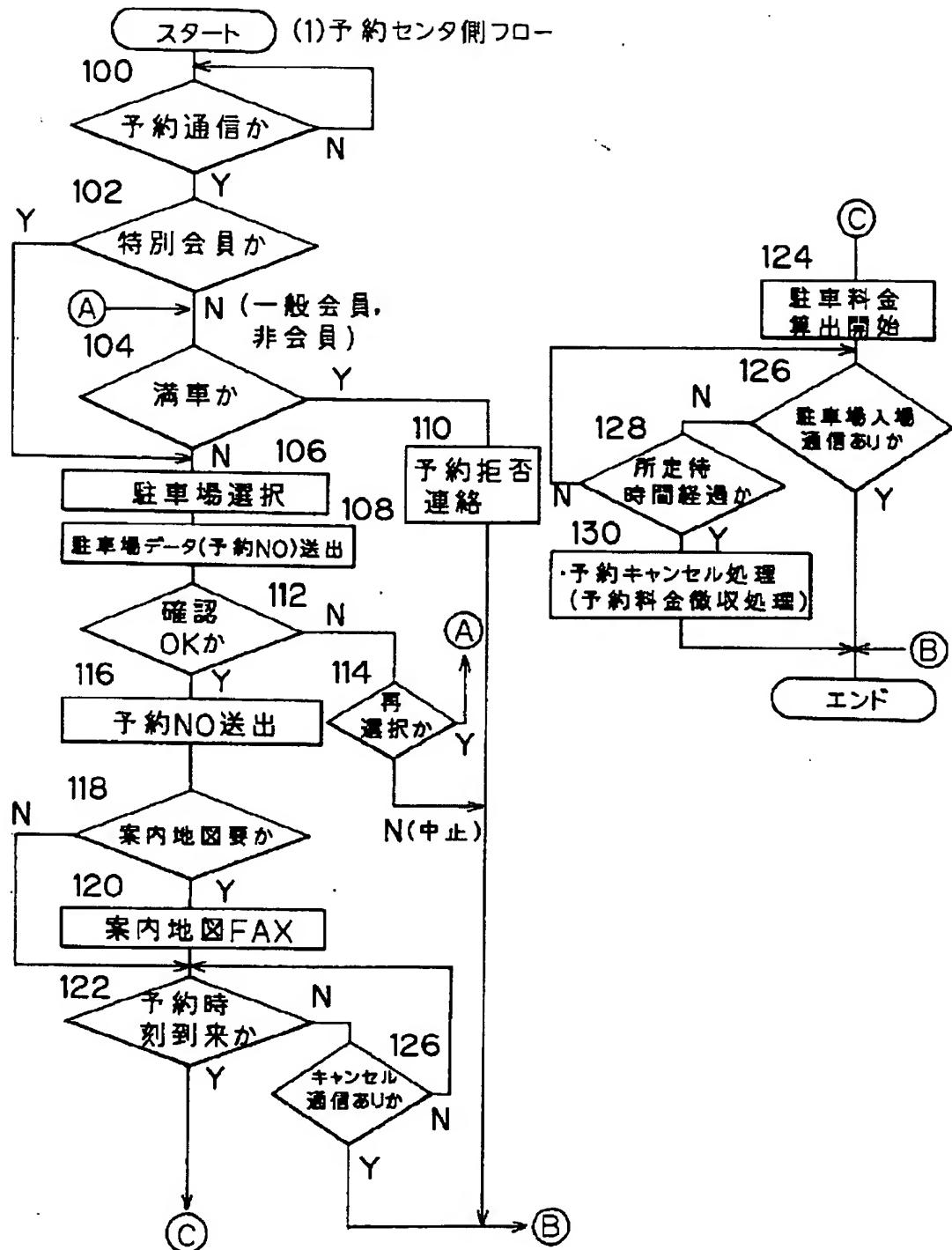
[Drawing 6]



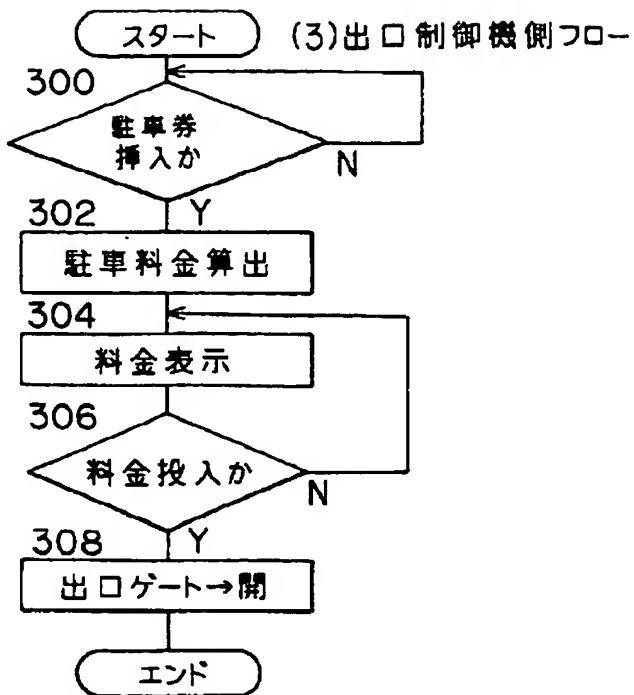
[Drawing 4]



[Drawing 5]



[Drawing 7]



[Translation done.]